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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,580	12/04/2003	Carlos R. Morrison	LEW 17,293-2	9878

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EXAMINER	
MOHANDESI, IRAJ A	

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/729,580	MORRISON, CARLOS R.	
	Examiner	Art Unit	
	Iraj A Mohandesi	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-18* is/are rejected.

7)☒ Claim(s) *19-22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/04/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 18-22 are recites the limitation "the selected wave form " in claim 18 and the limitation "the waveform" in claims 19-22. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 12-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Hollis Jr 4,874,998.

With regards to claims 12-16 Hollis'998 discloses a programmable software-controlled (column 9,line 66) magnetically levitated device coupled to first and second magnetic bearing (4, column 4,linens 55-65) supporting a rotor (1) to control positioning of the rotor in the bearings, the rotor having a longimdinal axis and the magnetic bearings defining a principal axis there between, each of the bearings having at least four magnetic poles (3, Fig. 1,2,3,4) with respective

magnet coils associated therewith, the voltage and/or current flow through the magnet coils generating force vectors to support the rotor for rotation relative to the bearings, the force vectors under the control of the processor to selectively position the longitudinal axis relative to the principal axis (column 10, linens, 1-40), the software (23, Fig.9) causing the processor to perform the function of: controlling the force vectors to align the rotor in its bearings so that the longitudinal axis thereof and the principal axis defined between the bearings are not axially coincident with one another and the longitudinal axis is off-set from the principal axis and the longitudinal axis is aligned non- parallel to the principal axis (see Fig. 4).

With regards to claims 17,18 Hollis'998 discloses a programmable software-controlled (column 9,line 66) magnetically levitated device, wherein the processor means provides a inherently selected waveform to be impressed on the magnetic field of the magnetic bearings and generates the selected waveform in response to execution of a set of instructions (column 9,line 24-64)

Allowable Subject Matter

3. Claims 19-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. With regards to claim 19, the prior art of the record in particular Hollis'998 does not teach a supporting structure for a software-controlled processing device wherein the waveform is impressed on the rotor at a selected angle relative to a

fixed reference coordinate system and remains stationary in that coordinate system during periods of time when the rotor is in motion.

5. With regards to claim 20, the prior art of the record in particular Hollis'998 does not teach a supporting structure for a software-controlled processing device wherein the waveform is impressed on the rotor at a selected angle relative to a fixed reference coordinate and rotates with the rotor when the rotor is in motion.

6. With regards to claim 21, the prior art of the record in particular Hollis'998 does not teach a supporting structure for a software-controlled processing device

wherein the waveform perturbation rotates in synchronism with the rotor when the rotor is in motion.

7. With regards to claim 22, the prior art of the record in particular Hollis'998 does not teach a supporting structure for a software-controlled processing device , wherein the waveform is selected from the group comprising sine waveform, sine squared waveform, cosine waveform cosine squared waveform, random waveform, square waveform, squared pulse waveform, triangular waveform, single square waveform, single triangular waveform, saw tooth waveform.

Communication

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Iraj A Mohandesi whose telephone number is 571-272-2028. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IM May 27, 2004

BURTON S. MULLINS
PRIMARY EXAMINER